



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2020-1073; Project Identifier MCAI-2020-01303-A; Amendment 39-21964; AD 2022-05-12]

RIN 2120-AA64

Airworthiness Directives; Embraer S.A. (Type Certificate Previously Held by Empresa Brasileira de Aeronáutica S.A.) Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is superseding Airworthiness Directive (AD) 2020-12-08 for all Embraer S.A. Model EMB-505 airplanes. AD 2020-12-08 required inspections of the mass-balance weights of the elevators, ailerons, and rudder (flight control surfaces) and their attachment parts, and corrective actions if necessary, and revising the airworthiness limitation section (ALS) of the maintenance manual or instructions for continued airworthiness to incorporate new airworthiness limitations. This AD retains the actions required by AD 2020-12-08 and requires, for certain airplanes, cleaning and weighing certain mass-balances and installation or replacement, as applicable; and for certain other mass-balances for certain airplanes, replacement of those mass-balances. This AD was prompted by a determination that new applicable airplane serial numbers and new criteria for the replacement of affected parts are necessary. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain other publication listed in this AD as of July 1, 2020 (85 FR 36312, June 16, 2020).

ADDRESSES: For service information identified in this final rule, contact Phenom Maintenance Support, Avenida Brigadeiro Faria Lima, 2170, P.O. Box 36/2, São José dos Campos, 12227-901, Brazil; phone: +55 12 3927 1000; email: phenom.reliability@embraer.com.br; website: <https://www.embraer.com.br/en-US/Pages/home.aspx>. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (817) 222-5110. It is also available at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-1073.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-1073; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the mandatory continuing airworthiness information (MCAI), any comments received, and other information. The address for Docket Operations is Document Operations, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington DC, 20590.

FOR FURTHER INFORMATION CONTACT: Jim Rutherford, Aerospace Engineer, General Aviation & Rotorcraft Section, International Validation Branch, FAA, 901 Locust, Room 301, Kansas City, MO 64106; phone: (816) 329-4165; email: jim.rutherford@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2020-12-08, Amendment 39-21143 (85 FR 36312, June 16, 2020), (AD 2020-12-08). AD 2020-12-08 applied to all Embraer S.A. (type certificate

previously held by Empresa Brasileira de Aeronáutica S.A.) Model EMB-505 airplanes and required for certain serial-numbered airplanes, inspecting the mass-balance weights of the flight control surfaces and their attachment parts for corrosion and fragmentation, and taking corrective actions if necessary, including sending inspection results to Embraer. For all airplanes, AD 2020-12-08 required revising the airworthiness limitation section of the maintenance manual or instructions for continued airworthiness to incorporate new airworthiness limitations.

The NPRM published in the *Federal Register* on September 9, 2021 (86 FR 50487). The NPRM was prompted by Brazilian AD 2020-09-01, dated September 8, 2020 (referred to after this as “the MCAI”), issued by the Agência Nacional de Aviação Civil (ANAC), which is the aviation authority for Brazil. The MCAI states:

It has been found the occurrence of corrosion in the mass-balance weights of the control surfaces. The corrosion may lead to loss of mass or detachment of the mass-balance weights, resulting in an unbalance control surface, which, in conjunction with certain flight conditions, could lead to flutter and possible loss of airplane control.

Since this condition may occur in other airplanes of the same type and affects flight safety, a corrective action is required. Thus, sufficient reason exists to request compliance with this [ANAC] AD in the indicated time limit.

After [ANAC] EAD [Emergency AD] 2020-01-01 was released, a reassessment of the unsafe condition by Embraer and, subsequently, the SB [service bulletin] 505-55-0004, revisions 0 and 1, dated March 25th, 2020 and June 24, 2020, respectively, expanding the list of affected aircraft serial numbers (S/Ns) as well as inserting more restrictive criteria to determine the replacement of affected P/Ns [part numbers].

Therefore, this [ANAC] AD retains the requirements of [ANAC] EAD 2020-01-01, which is superseded, and incorporates new applicable aircraft S/Ns and new criteria for the replacement of affected P/Ns.

You may examine the MCAI in the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-1073.

In the NPRM, the FAA proposed to retain the actions required by AD 2020-12-08 and proposed to require, for certain airplanes, cleaning and weighing certain mass-balances and installation or replacement, as applicable; and for certain other mass-

balances for certain airplanes, replacement of those mass-balances. In the NPRM, the FAA also proposed to remove the reporting required by AD 2020-12-08.

Ex Parte Contact

After the comment period closed, the FAA requested clarification from Embraer about airplane delivery documentation based on a comment from NetJets. A summary of this discussion can be found in the rulemaking docket at <https://www.regulations.gov> in Docket No. FAA-2020-1073.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from Embraer and NetJets. The following presents the comments received on the NPRM and the FAA's response to each comment.

Request to Add "Required for Compliance" Language

Embraer requested that the FAA revise the proposed AD to add language concerning steps in the service information that are "Required for Compliance" (RC). Specifically, the commenter requested the FAA add RC language that has been used in previous ADs for Embraer products, which states that steps labeled as RC must be done to comply with the AD, while steps not labeled as RC may be deviated from using accepted methods. The commenter noted that since the proposed AD specifies complying with several steps with an Embraer service bulletin, the RC method would be useful in avoiding the need for alternative methods of compliance (AMOCs).

The FAA adds the RC language requested by Embraer to ADs when the service information that is incorporated by reference in an AD contains steps with the "RC" notation. Because none of the steps in the service information incorporated by reference in this AD contain the "RC" notation, the language requested by the commenter is inapplicable. Additional information about the RC method can be found in FAA Advisory Circular (AC) No. 20-176A, *Service Bulletins Related to Airworthiness Directives and Indicating FAA Approval on Service Documents*, dated June 16, 2014.¹

¹ You can obtain a copy of this AC from the FAA's website at https://www.faa.gov/regulations_policies/advisory_circulars/.

Request to Add Credit Service Information

In the NPRM, the FAA proposed to retain the actions in paragraph (h) of the AD, which required compliance with Embraer Alert Service Bulletin SB505-55-A004, Revision 5, dated December 12, 2019 (SB505-55-A004R5). The FAA further proposed to allow credit for the actions in paragraph (h) of the AD if done previously using Embraer Alert Service Bulletin SB505-55-A004, Revision 06, dated March 25, 2020 (SB505-55-A004R06). For the new actions in paragraphs (l) through (n) of the proposed AD, the FAA proposed to require compliance with Embraer Service Bulletin SB505-55-0004, Revision 01, dated June 24, 2020 (SB505-55-0004R01). The FAA further proposed to allow credit for those actions if previously done using Embraer Service Bulletin SB505-55-0004, dated March 25, 2020.

NetJets requested that the FAA revise the proposed credit paragraphs to allow credit for actions required by paragraph (h) of the proposed AD if previously done using Embraer SB505-55-A004R5 and credit for actions required by paragraphs (l) through (n) of the proposed AD if previously done Embraer SB505-55-0004R01.

The FAA notes that paragraph (f) of this AD requires compliance unless already done. Thus, the AD already allows operators to take credit for the actions required by paragraphs (h), (l), (m), and (n) if done before the effective date of the AD. The commenter's requested changes are unnecessary.

Request to Revise Compliance Time

In the NPRM, the FAA retained certain actions and proposed new actions, with compliance times based on the age of the airplane. For the retained actions, the FAA proposed that the compliance time remain based on "the date of issuance of the original airworthiness certificate or the original export certificate of airworthiness." For the new actions, the FAA proposed compliance times since new, with a proposed definition of "since new" as "since the date of issuance of the original airworthiness certificate or the original export certificate of airworthiness."

NetJets requested the FAA change the proposed compliance time from "within 60 months since new" to "within the next 60 months scheduled maintenance package." The commenter stated that, upon aircraft delivery, Embraer provides a recommended date to

start counting calendar inspections and that this recommended start date does not always match the date of issuance of the original airworthiness certificate or the original export certificate of airworthiness. NetJets stated it operates a large fleet of affected aircraft, and if the compliance dates in the AD do not align with the scheduled maintenance package based on Embraer's recommended state date, it could create an undue hardship, potential downtime, and lost revenue. With its comment, NetJets provided an example of an Embraer Technical Disposition (ETD) letter with a recommended start date for counting calendar inspections.

The FAA has determined that the compliance times, as proposed, correspond to the compliance times in the MCAI and will ensure an acceptable level of safety. The FAA notes that the change requested by the commenter would only affect some inspections required by the AD (those that require compliance within 60 months where the term "since new" is used). Accordingly, the change requested by the commenter would result in the compliance times for some of the new inspections not aligning with the compliance times for the other new inspections or with the retained actions. The FAA has not changed this AD in this regard. However, operators may propose a change in the compliance time in accordance with the AMOC procedures specified in paragraph (p) of this AD.

Conclusion

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to the FAA's bilateral agreement with this State of Design Authority, it has notified the FAA of the unsafe condition described in the MCAI and service information described above. The FAA reviewed the relevant data and determined that air safety and the public interest require adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. This AD is adopted as proposed in the NPRM.

Related Service Information under 1 CFR Part 51

The FAA reviewed Embraer Alert Service Bulletin SB505-55-A004, Revision 06, dated March 25, 2020. This service information specifies procedures for inspecting the

mass-balance weights of the flight control surfaces and their respective attachment parts for corrosion and fragmentation, and performing corrective actions on certain serial-numbered Model EMB-505 airplanes. Corrective actions include installation of a stainless steel mass-balance, replacement of the mass-balance, and replacement of attachment parts.

The FAA also reviewed Embraer Service Bulletin SB505-55-0004, Revision 01, dated June 24, 2020. This service information specifies procedures, for certain airplanes, for cleaning and weighing the elevator, aileron, and rudder mass-balances, and installing or replacing the mass-balances (includes replacing attachment parts), as applicable, and for certain elevator mass-balances for certain airplanes, replacing those elevator mass-balances (includes replacing attachment parts).

Embraer has also issued Alert Service Bulletin SB505-55-A004, Revision 5, dated December 12, 2019, which the Director of the Federal Register approved for incorporation by reference as of July 1, 2020 (85 FR 36312, June 16, 2020).

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Other Related Service Information

Embraer has also issued Embraer Service Bulletin SB505-55-0004, dated March 25, 2020. The actions specified in Embraer Service Bulletin SB505-55-0004, dated March 25, 2020, are the same as those specified in Embraer SB505-55-0004R01; however, Embraer SB505-55-0004R01 was issued to add serial-numbered airplanes to the effectivity. No additional work is required for airplanes on which Embraer Service Bulletin SB505-55-0004, dated March 25, 2020, has been accomplished.

Differences Between this AD and the Service Information

Embraer SB505-55-A004R5 and Embraer SB505-55-A004R06 contain procedures for inspecting for the integrity of the mass-balance weights of flight control surfaces and their attachment parts. This AD does not include that requirement.

Costs of Compliance

The FAA estimates that this AD affects 392 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

Estimated costs for required actions

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Retained inspections from AD 2020-12-08	9 work-hours x \$85 per hour = \$765	\$100	\$865	\$339,080
Retained ALS revision from AD 2020-12-08	1 work hour x 85 per hour = \$85	\$0	\$85	\$33,320
New cleaning, weighing, and replacement	Up to 130 work-hours X \$85 per hour = Up to \$11,050	Up to \$18,118	Up to \$29,168	Up to \$11,433,856

The FAA estimates the following costs to do any necessary installations or replacements that would be required based on the results of the inspections and weighing. The FAA has no way of determining the number of aircraft that might need these actions:

Estimated costs of on-condition actions

Action	Labor cost	Parts cost	Cost per product
Installation or replacement	Up to 129 work-hours x \$85 per hour = Up to \$10,965	Up to \$18,118	Up to \$29,083

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by

prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

- 2. The FAA amends § 39.13 by:

- a. Removing Airworthiness Directive 2020-12-08, Amendment 39-21143 (85 FR 36312, June 16, 2020); and

- b. Adding the following new airworthiness directive:

2022-05-12 Embraer S.A. (Type Certificate previously held by Empresa Brasileira de Aeronáutica S.A.): Amendment 39-21964; Docket No. FAA-2020-1073; Project Identifier MCAI-2020-01303-A.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD replaces AD 2020-12-08, Amendment 39-21143 (85 FR 36312, June 16, 2020) (AD 2020-12-08).

(c) Applicability

This AD applies to Embraer S.A. (type certificate previously held by Empresa Brasileira de Aeronáutica S.A.) Model EMB-505 airplanes, all serial numbers, certificated in any category.

(d) Subject

Joint Aircraft System Component (JASC) Code 5520, Elevator Structure; 5540, Rudder Structure; and 5751, Ailerons.

(e) Unsafe Condition

This AD was prompted by reports of corrosion in the mass-balance weights of the flight control surfaces and a determination that new airworthiness limitations are necessary. The FAA is issuing this AD to address corrosion in the mass-balance weights of the flight control surfaces. The unsafe condition, if not addressed, could result in loss of mass or the detachment of the mass-balance weights, resulting in an unbalanced control surface, which could lead to flutter and loss of airplane control.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Retained Compliance Times for the Actions Required by Paragraph (h) of this AD, with No Changes

This paragraph restates the requirements of paragraph (g) of AD 2020-12-08, with no changes. For airplanes with a serial number listed in Embraer Alert Service Bulletin SB505-55-A004, Revision 5, dated December 12, 2019 (Embraer SB505-55-A004R5): At the applicable compliance time specified in paragraph (g)(1), (2), or (3) of this AD, accomplish the actions required by paragraph (h) of this AD.

(1) For airplanes with a serial number listed in Group 1 of Embraer SB505-55-A004R5: Within 3 calendar days or 5 hours time-in-service (TIS), whichever occurs first, after July 1, 2020 (the effective date of AD 2020-12-08).

(2) For airplanes with a serial number listed in Group 3 of Embraer SB505-55-A004R5: Within 30 calendar days or 50 hours TIS, whichever occurs first, after July 1, 2020 (the effective date of AD 2020-12-08).

(3) For airplanes with a serial number listed in Group 2 of Embraer SB505-55-A004R5: Within 60 calendar days or 100 hours TIS, whichever occurs first, after July 1, 2020 (the effective date of AD 2020-12-08).

(h) Retained Required Actions, Without Reporting Requirement

This paragraph restates the requirements of paragraph (h) of AD 2020-12-08, without the requirement to report information to Embraer. For airplanes with a serial number listed in Embraer SB505-55-A004R5, at the applicable time specified in paragraph (g) of this AD: Do the inspections identified in paragraphs (h)(1) through (6) of this AD and, before further flight, install or replace the mass-balance, as applicable, and replace the attachment parts, in accordance with Parts I through VI and Part VIII, as applicable, of the Accomplishment Instructions of Embraer SB505-55-A004R5; except, where the service information tells you to submit information to Embraer, this AD does not require that action.

(1) Do an inspection of the elevator horn mass-balance weights and attachment parts for corrosion and fragmentation, and weigh each mass-balance.

(2) Do an inspection of the elevator internal mass-balance weights and attachment parts for corrosion and fragmentation, and weigh each mass-balance. You must remove and weigh the mass-balance weight even if there is no sign of corrosion or material fragmentation.

(3) Do an inspection of the elevator adjustable mass-balance weights and attachment parts for corrosion and fragmentation, and weigh each mass-balance.

(4) Do an inspection of the aileron mass-balance weights and attachment parts for corrosion and fragmentation, and weigh each mass-balance. You must remove and weigh the mass-balance weight even if there is no sign of corrosion or material fragmentation.

(5) Do an inspection of the rudder adjustable mass-balance weights and attachment parts for corrosion and fragmentation, and weigh each mass-balance.

(6) Do an inspection of the rudder internal mass-balance weights and attachment parts for corrosion and fragmentation, and weigh each mass-balance. You must remove and weigh the mass-balance weight even if there is no sign of corrosion or material fragmentation.

(i) Retained Revision of the Airworthiness Limitations Section, with No Changes

This paragraph restates the requirements of paragraph (i) of AD 2020-12-08, with no changes. Within 10 days after July 1, 2020 (the effective date of AD 2020-12-08), revise the airworthiness limitations section (ALS) of the existing maintenance manual or instructions for continued airworthiness to add the information in table 1 to paragraph (i) of this AD and the initial compliance time information in table 2 to paragraph (i) of this AD.

Table 1 to paragraph (i) – New Airworthiness Limitations

Maintenance Requirement	Inspection Type	Inspection Title	Interval
55-20-04-001	General visual inspection (GVI)	Internal GVI of Elevator Mass-Balance Weight and Attachments	60 Months (MO)
55-20-04-002	Special detailed inspection (SDI)	SDI (Borescope Method) of Elevator Mass-Balance Weight and Attachments	60 MO
55-40-04-002	GVI	Internal GVI of Rudder Adjustable Mass-Balance Weight and Attachments	60 MO

Maintenance Requirement	Inspection Type	Inspection Title	Interval
55-40-04-003	SDI	SDI (Borescope Method) of Rudder Fixed Mass-Balance Weight and Attachments	60 MO
57-60-00-001	Detailed visual inspection (DET)	External DET of the Aileron	60 MO

Table 2 to paragraph (i) – Initial compliance time for the inspections listed in Table 1 to paragraph (i) of this AD

Age of airplane on July 1, 2020 (the effective date of AD 2020-12-08)	Initial Compliance Time for Each Inspection
Less than 48 MO since the date of issuance of the original airworthiness certificate or the original export certificate of airworthiness	Within 60 MO after the date of issuance of the original airworthiness certificate or the original export certificate of airworthiness
Between 48 MO and 72 MO since the date of issuance of the original airworthiness certificate or the original export certificate of airworthiness	Within 12 MO after July 1, 2020 (the effective date of AD 2020-12-08), or within 72 MO after the date of issuance of the original airworthiness certificate or the original export certificate of airworthiness, whichever occurs first
More than 72 MO since the date of issuance of the original airworthiness certificate or the original export certificate of airworthiness	Within 30 days after July 1, 2020 (the effective date of AD 2020-12-08)

(j) Retained Provision: No Alternative Actions or Intervals, with No Changes

This paragraph restates the requirements of paragraph (j) of AD 2020-12-08, with no changes. After the ALS has been revised as required by paragraph (i) of this AD, no alternative inspection intervals may be approved, except as provided in paragraph (p) of this AD.

(k) New Definition

For the purposes of this AD, “since new” is defined as since the date of issuance of the original airworthiness certificate or the original export certificate of airworthiness.

(l) New Elevator Mass-Balance Actions (Groups 1, 2, and 3)

At the applicable compliance time specified in paragraph (l)(1), (2), or (3) of this AD, clean, weigh, and, as applicable, install or replace the elevator mass-balances; or replace the elevator mass-balances; as applicable, in accordance with Part I of the Accomplishment Instructions in Embraer Service Bulletin SB505-55-0004, Revision 01, dated June 24, 2020 (Embraer SB505-55-0004R01). Where steps (1)(d), (2)(d), and (3)(e) of Part I of the Accomplishment Instructions in Embraer SB505-55-0004R01 reference “criteria of the PART I,” use the criteria in section 1.D. of Embraer SB505-55-0004R01.

(1) For airplanes with a serial number listed as Group 1 or Group 3 in paragraphs 1.A.(1)(a) and (c), respectively, of Embraer SB505-55-0004R01: Within 12 months after the effective date of this AD.

(2) For airplanes with a serial number listed as Group 2 in paragraph 1.A.(1)(b) of Embraer SB505-55-0004R01, which are not included in the effectivity of Embraer SB505-55-A004R5 or Embraer Alert Service Bulletin SB505-55-A004, Revision 06, dated March 25, 2020 (Embraer SB505-55-A004R06): At the applicable compliance time specified in paragraph (l)(2)(i), (ii), (iii), (iv), (v), or (vi) of this AD.

(i) For airplanes with 12 or fewer months since new as of the effective date of this AD: Within 18 months after the effective date of this AD.

(ii) For airplanes with more than 12 months but 24 or fewer months since new as of the effective date of this AD: Within 12 months after the effective date of this AD.

(iii) For airplanes with more than 24 months but 36 or fewer months since new as of the effective date of this AD: Within 9 months after the effective date of this AD.

(iv) For airplanes with more than 36 months but 48 or fewer months since new as of the effective date of this AD: Within 7 months after the effective date of this AD.

(v) For airplanes with more than 48 months but 60 or fewer months since new as of the effective date of this AD: Within 6 months after the effective date of this AD.

(vi) For airplanes with more than 60 months since new as of the effective date of this AD: Within 5 months after the effective date of this AD.

(3) For airplanes with a serial number listed as Group 2 in paragraph 1.A.(1)(b) of Embraer SB505-55-0004R01, which are included in the effectivity of Embraer SB505-55-A004R5 or Embraer SB505-55-A004R06: Before further flight.

(m) New Aileron Mass Balance Actions (Groups 1 and 2)

At the applicable compliance time specified in paragraph (m)(1), (2), or (3) of this AD, clean, weigh, and, as applicable, install or replace the aileron mass-balance in accordance with Part II of the Accomplishment Instructions in Embraer SB505-55-0004R01. Where steps (1)(c) and (2)(c) of Part II of the Accomplishment Instructions in Embraer SB505-55-0004R01 reference “criteria of the PART II,” use the criteria in section 1.D. of Embraer SB505-55-0004R01.

(1) For airplanes with a serial number listed as Group 1 in paragraph 1.A.(2)(a) of Embraer SB505-55-0004R01: Within 60 months after the effective date of this AD.

(2) For airplanes with a serial number listed as Group 2 in paragraph 1.A.(2)(b) of Embraer SB505-55-0004R01, which are not included in the effectivity of Embraer SB505-55-A004R5 or Embraer SB505-55-A004R06: At the applicable compliance time specified in paragraph (m)(2)(i) or (ii) of this AD.

(i) For airplanes with 59 or fewer months since new as of the effective date of this AD: Within 60 months since new.

(ii) For airplanes with more than 59 months since new as of the effective date of this AD: Within 120 months since new.

(3) For airplanes with a serial number listed as Group 2 in paragraph 1.A.(2)(b) of Embraer SB505-55-0004R01, which are included in the effectivity of Embraer SB505-55-A004R5 or Embraer SB505-55-A004R06: Before further flight.

(n) New Rudder Mass Balance Actions (Groups 1 and 2)

At the applicable compliance time specified in paragraph (n)(1), (2), or (3) of this AD, clean, weigh, and, as applicable, install or replace the rudder mass-balances in accordance with Part III of the Accomplishment Instructions in Embraer

SB505-55-0004R01. Where steps (1)(c) and (2)(c) of Part III of the Accomplishment Instructions in Embraer SB505-55-0004R01 reference “criteria of the PART III,” use the criteria in section 1.D. of Embraer SB505-55-0004R01.

(1) For airplanes with a serial number listed as Group 1 in paragraph 1.A.(3)(a) of Embraer SB505-55-0004R01: At the applicable compliance time specified in paragraph (n)(1)(i), (ii), or (iii) of this AD.

(i) For airplanes with 59 or fewer months since new as of the effective date of this AD: Within 60 months since new.

(ii) For airplanes with more than 59 months but 119 or fewer months since new as of the effective date of this AD: Within 120 months since new.

(iii) For airplanes with more than 119 months since new as of the effective date of this AD: Within 6 months after the effective date of this AD.

(2) For airplanes with a serial number listed as Group 2 in paragraph 1.A.(3)(b) of Embraer SB505-55-0004R01, which are not included in the effectivity of Embraer SB505-55-A004R5 or Embraer SB505-55-A004R06: At the applicable compliance time specified in paragraph (n)(2)(i) or (ii) of this AD.

(i) For airplanes with 59 or fewer months since new as of the effective date of this AD: Within 60 months since new.

(ii) For airplanes with more than 59 months since new as of the effective date of this AD: Within 120 months since new.

(3) For airplanes with a serial number listed as Group 2 in paragraph 1.A.(3)(b) of Embraer SB505-55-0004R01, which are included in the effectivity of Embraer SB505-55-A004R5 or Embraer SB505-55-A004R06: Before further flight.

(o) Credit for Previous Actions

(1) This paragraph provides credit for the actions required by paragraph (h) of this AD, if you performed those actions before July 1, 2020 (the effective date of AD 2020-12-08) using the service information specified in paragraphs (o)(1)(i), (ii), or (iii) of this AD.

(i) Embraer Alert Service Bulletin SB505-55-A004, Revision 2, dated November 6, 2019.

(ii) Embraer Alert Service Bulletin SB505-55-A004, Revision 3, dated November 13, 2019.

(iii) Embraer Alert Service Bulletin SB505-55-A004, Revision 4, dated November 21, 2019.

(2) This paragraph provides credit for the actions required by paragraph (h) of this AD, if you performed those actions before the effective date of this AD using Embraer SB505-55-A004R06.

(3) This paragraph provides credit for the initial inspections required by table 2 to paragraph (i) of this AD, if you performed those actions before July 1, 2020 (the effective date of AD 2020-12-08) using the service information specified in paragraphs (o)(3)(i), (ii), or (iii) of this AD.

(i) Embraer Alert Service Bulletin SB505-55-A004, Revision 2, dated November 6, 2019.

(ii) Embraer Alert Service Bulletin SB505-55-A004, Revision 3, dated November 13, 2019.

(iii) Embraer Alert Service Bulletin SB505-55-A004, Revision 4, dated November 21, 2019.

(4) This paragraph provides credit for the initial inspections required by table 2 to paragraph (i) of this AD, if you performed those actions before the effective date of this AD using Embraer SB505-55-A004R5 or Embraer SB505-55-A004R06.

(5) This paragraph provides credit for the actions required by paragraphs (l), (m), and (n) of this AD, if you performed those actions before the effective date of this AD using Embraer Service Bulletin SB505-55-0004, dated March 25, 2020.

(p) Alternative Methods of Compliance (AMOCs)

(1) The Manager, General Aviation & Rotorcraft Section, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the General Aviation & Rotorcraft

Section, International Validation Branch, send it to the attention of the person identified in paragraph (q)(1) of this AD and email to: 9-AVS-AIR-730-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) AMOCs approved for AD 2020-12-08 are approved as AMOCs for the corresponding provisions of this AD.

(q) Related Information

(1) For more information about this AD, contact Jim Rutherford, Aviation Safety Engineer, General Aviation & Rotorcraft Section, International Validation Branch, FAA, 901 Locust, Room 301, Kansas City, MO 64106; phone: (816) 329-4165; email: jim.rutherford@faa.gov.

(2) Refer to Mandatory Continuing Airworthiness Information (MCAI) Brazilian AD 2020-09-01, dated September 8, 2020, for related information. You may examine the MCAI in the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-1073.

(3) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (r)(5) and (6) of this AD.

(r) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(3) The following service information was approved for IBR on [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(i) Embraer Alert Service Bulletin SB505-55-A004, Revision 06, dated March 25, 2020.

(ii) Embraer Service Bulletin SB505-55-0004, Revision 01, dated June 24, 2020.

(4) The following service information was approved for IBR on July 1, 2020 (85 FR 36312, June 16, 2020).

(i) Embraer Alert Service Bulletin SB505-55-A004, Revision 5, dated December 12, 2019.

(ii) [Reserved]

(5) For service information identified in this AD, contact Phenom Maintenance Support, Avenida Brigadeiro Faria Lima, 2170, P.O. Box 36/2, São José dos Campos, 12227-901, Brazil; phone: +55 12 3927 1000; email: phenom.reliability@embraer.com.br; website: <https://www.embraer.com.br/en-US/Pages/home.aspx>.

(6) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (817) 222-5110.

(7) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email: fr.inspection@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on February 24, 2022.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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